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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/623,884	11/15/2000	John Hassard	33013-2	9285

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EXAMINER	
STARSIAK, JOHN S	
ART UNIT	PAPER NUMBER
1743	6

DATE MAILED: 06/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

T-D-6

Office Action Summary	Application No. 09/623,884	Applicant(s) John Hassard
	Examiner J. STARSIAK	Group Art Unit 1743

—Th MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

P riod for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☒ Responsive to communication(s) filed on 15 November.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-17 is/are pending in the application.

Of the above claim(s) 6-17 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-5 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Pri rity under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____.

Attachment(s)

☐ Information Disclosure Statem nt(s), PTO-1449, Paper No(s). _____

☒ Notice of Ref rence(s) Cited, PTO-892

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Int rview Summary, PTO-413

☐ Notice of Informal Patent Application, PTO-152

☐ Other _____

Office Action Summary

DETAILED ACTION

Claim Objections

Claims 6 to 17 are objected to under 37 CFR 1.75© as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim . See MPEP § 608.01(n). Accordingly, the claims 6 to 17 not been further treated on the merits.

Claim Rejections - 35 USC § 112

Claims 1 to 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 the applicant recites, " an array of *one* or more elongate capillary channels...". This recitation is repugnant to the normal meaning of an array, i.e. an array must have a plurality of elements. Claims 2 to 5 are recited because they depend on claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Swedberg et al.

The analysis device of Swedberg et al clearly discloses all the particulars recited in the above claims . The device of Swedberg et al comprises: a substrate 6 and a channel 10 formed therein (see Fig. 1 & 2). Regarding the material from which the substrate is fabricated, Swedberg et al recites [col. 7, lines 53-59]: "The term "substrate" is used herein to refer to any material which is UV-adsorbing, capable of being laser ablated and which is not silicon or silicon dioxide material...Accordingly, miniaturized column devices are formed herein using suitable substrates, such as laser abatable polymers (including polyimides and the like...". Regarding the means for driving a sample, Swedberg et al recites [col. 11, lines 58-63] : " The term "motive means" is used to refer to any means for inducing movement of a sample along a column in a liquid phase analysis, and includes application of an electric potential across any portion of the column, application of a pressure differential across any portion of the column or any combination thereof.". Regarding the radiation source and the radiation detector, Swedberg et al recites [col. 9, lines 40-59]: "An "optical detection path" refers to a configuration or arrangement of detection means to form a path whereby radiation, such as a ray of light, is able to travel from an external source to a means for receiving radiation-wherein the radiation traverses the sample processing compartment and can be influenced by the sample or separated analytes in the sample flowing through the sample processing compartment. In this configuration, analytes passing through the sample processing compartment can be detected via transmission of radiation orthogonal to the

major axis of the sample processing compartment (and, accordingly, orthogonal to the direction of electroosmotic flow in an electrophoretic separation). A variety of external optical detection techniques can be readily interfaced with the sample processing compartment using an optical detection path including, but not limited to, UV/Vis, Near IR, fluorescence, refractive index (RI) and Raman techniques.". Regarding the size limitations recited in claims 4 and 5, Swedberg et al recites [col. 21, lines 35-37]: " In this regard, miniaturized columns may be provided which have microcapillary dimensions (ranging from 5-200 μm in diameter)...".

Allowable Subject Matter

Claims 2 & 3 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

An appropriate search of the prior art failed to reveal any reference(s) which explicitly teaches or fairly suggests an analyzer comprising: a substrate; at least one capillary channel formed in the substrate; means for driving a sample to be tested along the at least one channel whereby the velocities of components of the sample along the at least one channel depends on the relative molecular weights of those components; a radiation source and a radiation detector on either side of the capillary array so that the presence of material in the channel as interruptions in the radiation path between the radiation source and the radiation detector; and one of the following particulars: 1) in which the substrate is formed of diamond, 2) in which the substrate is formed of sapphire having a coating of nanocrystalline diamond.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John S. Starsiak Jr. whose telephone number is (703) 308-1797. The examiner can normally be reached on Monday to Wednesday from 8:00 AM to 3:30 AM and on Thursday and Friday from 8:00 AM to 12:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden, can be reached on (703) 308-4037. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3559.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Jill Warden
Supervisory Patent Examiner
Technology Center 1700

John S. Starsiak Jr.

03 June 2002